

CHAPTER 4

THE DESIGN CRITERIA

4-1. Introduction.

The design criteria document is the basis for design. It identifies all requirements for the design of the outdoor play area, including findings of the site inventory and analysis, the user needs analysis, and relevant guidance provided in standards, regulations, and the installation master plan. Based on this information, the designer will develop a conceptual (10%) design that identifies selected play area components and the site layout. The play area design should be well-defined and age-appropriate. A play area primarily composed of manufactured play equipment or freestanding play equipment scattered throughout a family housing area does not fully meet this requirement.

4-2. Confirm the Age Group Served.

The play area designer and play area committee should review population data and the results of the user needs analysis. Based on these findings, the age group to be served by the play area will be confirmed. This age group will be documented in the design criteria report.

4-3. Identify Play Area Goals.

The goals for the play area should identify the play area's key developmental and environmental benefits. The goals should also address management issues, such as maintenance and implementation of standards and regulations. These goals are part of the design criteria report.

4-4. Play Area Components and Manufactured Play Equipment.

To create a diverse play area, a variety of components that support children's physical, cognitive, emotional, and social development should be included. A play area component creates a defined setting that supports a particular type of play activity, such as dramatic play, or supports user safety, comfort, and convenience. Play area components may include: the entry area; pathways; sports and games; dramatic play; sand play; gardens; gathering places; manufactured play equipment; plant materials; land forms; separation and barriers; signage; and parking.

a. Play Area Components. In figure 4-1, the play area includes four components: manufactured play equipment, dramatic play, pathways, and the entry area. Each play area component may consist of one

or more design elements. For example, the dramatic play component in figure 4-1 includes the following design elements: platforms, shade, and a bench.

b. Manufactured Play Equipment. Play equipment is one of many types of play area components that comprise a play area. Manufactured play equipment should also be carefully selected to ensure that it meets the safety requirements for the primary age group using the play area, provides a variety of play activities to meet developmental needs, and meets the needs of children with disabilities.

(1) *Play Events.* Manufactured play equipment, such as climbers, slides, and track rides, that provides one or more play activities is called a play event (fig 4-2). For example, the play activities provided by the manufactured play equipment in figure 4-2 may include climbing, sliding, and dramatic play.

(2) *Freestanding Structure.* A single play event, such as swings, rocking animals, or climbers, may be installed as a freestanding structure that is not functionally linked to any other play event. In figure 4-2, the slide is installed as a freestanding structure.

(3) *Composite Structure.* In addition, two or more play events may be combined to form a composite structure. In figure 4-2, the composite structure includes the following play events: ring climber, slide, horizontal ladder, and track ride.

4-5. Selection Criteria for Play Area Components.

When selecting play components, child development needs, accessibility, maintenance requirements and costs should be considered.

a. Child Development. A diverse play area that supports child development will include a range of play activity, sensory variety, spatial complexity, graduated challenge, and linkage and flow between play area components. Chapter 5 illustrates how play area component may be combined to create diverse play areas.

(1) *Range of Play Activity.* Children develop physically, cognitively, emotionally, and socially through interaction with the environment and each other. Most existing play areas emphasize gross motor activity and sensory activity. Properly designed and selected play area components should also support fine motor activity, social play, and other developmental needs. A given play area component can support different developmental needs depending upon how it is used by a child. For example, manu-

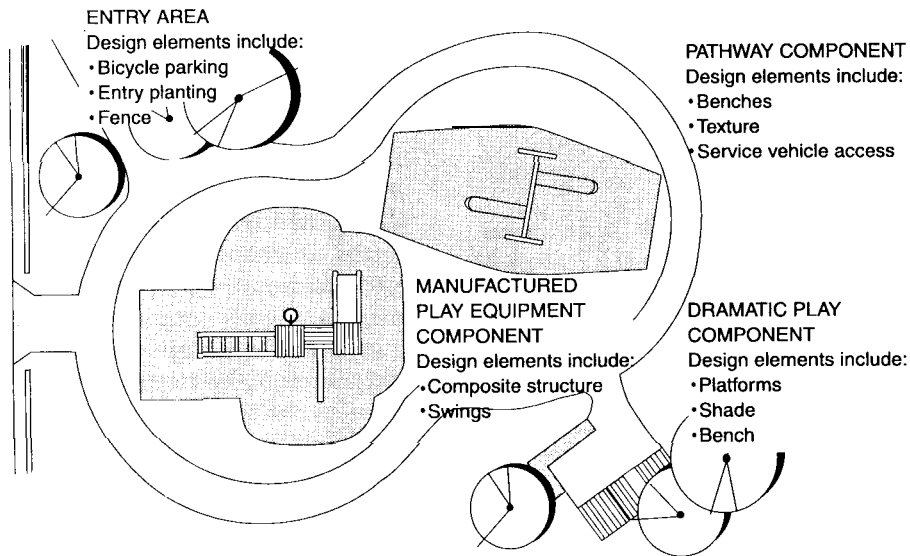


Figure 4-1 Play Area Components and Design Elements

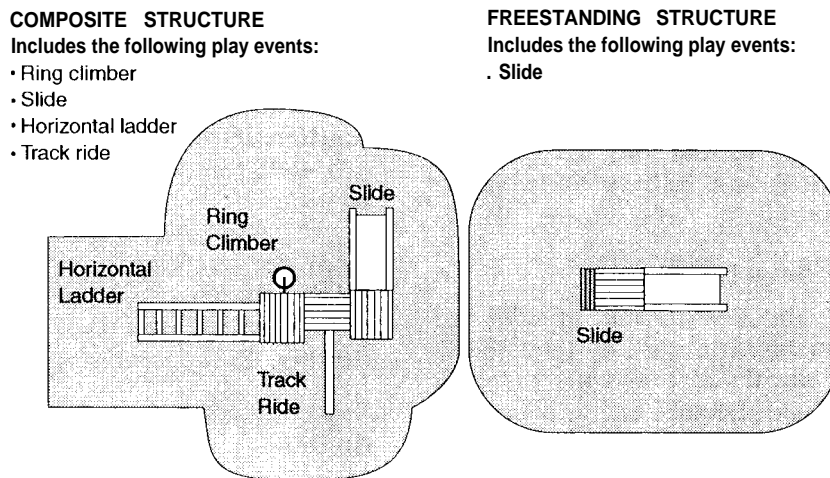


Figure 4-2. Composite Structures, Freestanding Structures, and Play Events

factured play equipment can serve as a hangout for socializing, a ship for dramatic play, or a tool for developing motor skills. Play area components that support a wide range of activities should be selected.

(2) *Sensory Variety.* A variety of sensory experiences enhances physical and cognitive development. In addition to movement activities, varied sounds, textures, colors, and light should be provided in the play area by incorporating a variety of natural and manmade materials in the design.

(3) *Spatial Complexity.* A variety of spatial experiences should be provided to assist children in learning concepts such as up and down, over and under, in and out, right and left, big and little, and deep and shallow. Manufactured play equipment

and land forms are two ways that these experiences can be supported by the play area design.

(4) *Graduated Challenge.* Varied levels of challenge should be provided in the play area. For example, a range of upper body challenges may be provided with manufactured play equipment by selecting play events that include turning bars, chinning bars, horizontal ladders, and track rides. These require a varying level of skill. Providing children with choices creates opportunities for all children to succeed. Varied levels of challenge also helps avoid loss of self-esteem that may occur when a child is limited to an activity which is too challenging.

(5) *Linkage and Flow.* One challenge of physical development involves children mastering the move-

ment of their bodies through space in a continuous sequence. Providing connection between play area components facilitates this developmental task during play. Linkage and flow between play area components should be enhanced by maintaining appropriate play area relationships and by designing pathways that connect all play area components.

b. Accessibility to Children and Adults With Disabilities. Play area components will be accessible to children and adults with disabilities. In addition to wheelchair users, the needs of children and adults who walk with canes, walkers, or crutches; who have limited use of the upper body; who have visual or hearing disabilities; or who have developmental disabilities will be considered. A diverse play area that includes a variety of play area components has the greatest potential for meeting the needs of all users. Rather than developing separate “handicapped” play areas, integrating all children in the same play setting will be emphasized. Most play area components can be made accessible. This manual provides guidelines for designing play areas to meet the needs of children with and without disabilities.

c. Maintenance and Cost. Maintenance requirements and cost are additional considerations in selecting play area components.

(1) *Maintenance Requirements.* Play area components require varying levels of maintenance. Ongoing maintenance is critical to sustaining safe play areas for children. During the design process, play area maintenance requirements should be considered and defined. Designers will select play area components that match the available maintenance resources. On installations with few maintenance resources, low maintenance components should be selected.

(2) *Cost.* The initial cost, anticipated useful life, and the maintenance cost should all be considered when selecting play area components. The sum of these costs represents the life cycle cost of the play area component. For example, sand safety surfacing has a low initial cost. However, when the anticipated useful life and maintenance costs of the surface are considered, this surface may not always provide the best value when compared to other safety surfaces. When needed to guide decision-making, a life cycle cost comparison should be prepared to help identify the most economical component.

4-6. Select Play Area Components.

Based on the findings of the user needs analysis and the site analysis, and the goals for the play area, play area components will be selected to meet the needs of the selected age group.

a. Age Appropriate Play Area Components. Table 4-1 identifies play area components that should be

considered during this selection process. This list identifies which play area components are appropriate for a given age group. It also lists those components which are required for all age groups. These components must support child safety and child development, and must be accessible to children with disabilities. The selected components should be identified in the design criteria report.

b. Manufactured Play Equipment. Table 4-2 provides recommendations for age appropriate play events. Table 4-3 summarizes primary play activities supported by play events. Chapter 10 describes how to adapt manufactured play equipment to meet the needs of children with disabilities.

4-7. Determine Space Requirements.

The space requirements for the selected play area components should be determined. Child safety and appropriate play area relationships should be considered. Guidance for determining space requirements for manufactured play equipment is provided in this manual. The play area space requirements will be presented in the design criteria report.

4-8. Reevaluate the Site.

Once the design criteria is identified, the designer should reevaluate the suitability of the site to meet identified needs.

4-9. Coordinate with the Play Area Committee.

The designer should present the findings of the design criteria report to the play area committee for review and comment.

Table 4-1. Priority Play Area Components by Age.

Play Area Components	6 weeks - 5 years	5-9 years	9-15 years
Entry area	X	X	X
Sports and games	Low	High	High
Dramatic play	High	Medium	Low
Sand play	High	Medium	N/A
Garden	Medium	Medium	Medium
Gathering places	High	High	High
Manufactured play equipment	High	High	Medium
Plant materials	X	X	X
Landforms	X	X	X
Pathways	X	X	X
Signage	X	X	X
Parking	X	X	X

X- Components necessary for all play areas.

Table 4-2. Recommended Play Events by Age Group.

Recommended Play Event	Recommended Age Group				
	6 weeks-5 years			5-9 years	9-12 years
	< 12 months	12-24 months	2-5 years		
Balance beam			X	X	X
Banister slide				X	X
Chinning/turning bar			X	X	X
Clatter bridge			X ²	X	X
Climber			X ³	X	X
Climber - arch			X ³	X	X
Climber - net			X ²	X	X
Fire pole				X	X
Game panel	X	X	X	X	X
Horizontal ladder			X ³	X	X
Parallel bars				X	X
Playhouse		X	X	X	
Ring trek				X	X
Sand table		X	X	X	
Slide		X ¹	X	X	X
Spring rocking equipment			X		
Stationary bridge	X	X	X	X	X
Swing - to-fro	X	X	X	X	X
Swing - rotating			X ²	X	X
Track ride				X	X
Tunnel	X	X	X	X	X
Composite structure		X	X	X	X

¹ Recommended for ages 2 and older.² Recommended for ages 3 and older.³ Recommended for ages 4 and older.

Table 4-3, Play Events and Primary Play Activities.

Play Event	Primary Play Activity				
	Gross Motor	Fine Motor	Social	Creative/Dramatic	Sensory
Balance beam	x			x	x
Banister slide	x				x
Chinning/turning bar	x				x
Clatter bridge	x			x	x
Climber	x				
Climber - arch	x				
Climber - net	x			x	
Fire pole	x			x	x
Game panel		x	x		x
Horizontal ladder	x				x
Parallel bars	x				x
Playhouse			x	x	
Ring trek	x				x
Sand table		x	x	x	
Slide	x				x
Spring rocking equipment	x		x	x	x
Stationary bridge	x			x	
Swing - to-fro	x				x
Swing - rotating	x				x
Track ride	x				x
Tunnel	x			x	
Composite structure	x			x	

X - Developmental activity provided